UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,853	03/17/2004	Ming-xing Han	1293.1238-D	1974

49455 7590 08/09/2005

STEIN, MCEWEN & BUI, LLP
1400 EYE STREET, NW
SUITE 300
WASHINGTON, DC 20005

EXAMINER	
KLIMOWICZ, WILLIAM JOSEPH	

ART UNIT	PAPER NUMBER
2652	

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Supplemental **Office Action Summary**	**Application No.** 10/801,853	**Applicant(s)** HAN, MING-XING	
	Examiner William J. Klimowicz	**Art Unit** 2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/955,046.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Supplemental Non-Final Office Action

This Office action supercedes the original Non-Final Office action mailed on July 26, 2005. In the Office action mailed on July 26, 2005, the reference to Sohn et al. (EP 0836185 A2) was incorrectly identified as Masaki et al. (WO 9916070 A1). This Office action corrects the inadvertent identification of the reference.

Divisional

U.S. Patent Application Serial Number 10/801,853 is a divisional of U.S. Patent Application Serial Number 09/955,046 filed on September 19, 2001, now U.S. Patent No. 6,731,588.

The specification in paragraph [0001] should be amended to reflect the current status of U.S. Patent Application Serial Number 09/955,046, that is it matured into U.S. Patent No. 6,731,588.

Claims 1-17 are currently pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Sohn et al. (EP 0836185 A2).

As per claim 1, Sohn et al. (EP 0836185 A2) discloses a self-compensating-dynamic-balancer (400) integrated clamper (see, *inter alia*, COL. 6, lines 21-27 and/or COL. 12, line 33 *et. seq.*) for pressing a disk (1) placed on a turntable (200) of a disk player, the clamper (300) comprising: a clamper main body (310) provided with a cavity (e.g., 350); a pressing member (320) installed at the clamper main body (310) for pressing the disk (1); movable members (370) movably disposed in the cavity (350) of the clamper main body (310); and a cover member (360) joined to an opening of the main body (310) to enclose the cavity (350).

As per claim 2, wherein the movable members (370) comprise a plurality of rigid bodies (371) and a fluid (372).

As per claim 3, wherein the turntable (200) comprises a magnet (235), a lower surface of the clamper main body (310) contacts the disk (1), and the pressing member is a yoke (321) installed at an inner lower portion of the clamper main body (310) so as to press the disk (1) by an interactive magnetic force between the yoke (321) and the turntable (200).

As per claim 4, wherein the pressing member (320) comprises: a pressing plate (324) which is movable vertically, and an elastic member (325) interposed between the clamper main body (310) and the pressing plate (324).

As per claim 5, wherein: the clamper main body comprises a cylindrical inner side wall (e.g., outer wall of race) and an another wall (e.g., inner wall of race) which form the cavity (350), and each rigid body (370) comprises a spherical shape which is free to roll within the clamper main body (310) (e.g., see, *inter alia*, COL. 13, lines 41-46).

As per claim 6, wherein a shape of a section of the cavity comprises a rectangular shape (e.g., see, *inter alia*, COL. 14, lines 15-19).

As per claim 7, wherein: the clamper main body (310) comprises a cylindrical inner side wall and an another wall which form the cavity, and each rigid body (370) comprises a cylindrical shape which is free to roll in contact with the cylindrical inner sidewall (e.g., see, *inter alia*, COL. 13, lines 41-46 and COL. 14, lines 15-19).

As per claim 8, wherein: the clamper main body (310) comprises a cylindrical inner side wall and an another wall which form the cavity, and each rigid body (370) comprises a conical frustum shape which is free to roll between the another wall and the cover member (e.g., see, *inter alia*, COL. 13, lines 41-46 and COL. 14, lines 15-19).

As per claim 9, wherein: the clamper main body (310) comprises a cylindrical inner side wall and an another wall which form the cavity, and each rigid body (370) comprises a sectorial pillar shape which is permitted to slide between the another wall and the cover member (e.g., see, *inter alia*, COL. 13, lines 41-46 and COL. 14, lines 15-19).

As per claim 10, wherein a shape of *a section* of the cavity comprises a "dumbbell" shape - FIG. 15.

As per claim 11, wherein a shape of *a section* of the cavity comprises a hyperbolic shape which has a narrow portion at a center portion of the hyperbolic shape and wider portions toward edge sides of the hyperbolic shape - see also, FIG. 15.

As per claim 12, wherein a shape of *a section* of the cavity comprises a half-hyperbolic shape - see FIGS. 14 and/or 15.

As per claim 14, wherein the movable members (370) comprise a plurality of rigid bodies (371).

As per claim 15, wherein the movable members (370) comprise a fluid (372).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sohn et al. (EP 0836185 A2).

See the description of Sohn et al. (EP 0836185 A2), *supra*.

With regard to claim 13, Sohn et al. (EP 0836185 A2) does not expressly show wherein a shape of a section of the cavity comprises an elliptical shape which has a wide portion at a center portion of the elliptical shape and narrower portions toward edge sides of the elliptical shape.

Moreover, *assuming* arguendo with regard to claims 10-12, that that a shape of *a section* of the cavity cannot be construed as having a "dumbbell," "hyperbolic," or "half-hyperbolic" shape, Official notice is taken that of that fact that races of varying shapes and sizes for controlling the flow of mobile bodies provided therein are notoriously old and well known and ubiquitous in the art; such Officially noticed fact being capable of instant and unquestionable demonstration as being well-known.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the shape of ***a section*** of the cavity of Sohn et al. (EP 0836185 A2) as comprising an elliptical shape which has a wide portion at a center portion of the elliptical shape and narrower portions toward edge sides of the elliptical shape and/or other shapes including those set forth in claims 10-12.

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the shape of ***a section*** of the cavity of Sohn et al. (EP 0836185 A2) as comprising an elliptical shape which has a wide portion at a center portion of the elliptical shape and narrower portions toward edge sides of the elliptical shape in order to provide a prescribed flow path of the rigid bodies in relation to the clamper which is being balanced (e.g., to prevent the bodies from moving too far outward and/or too far inward, the shape of the race can be readily modified in an elliptical form, and to control the location and amount of movement of the mobile members therewithin). No new or unobvious result is seen to be obtained by altering the shape of the race interior.

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sohn et al. (EP 0836185 A2) in view of Omori et al. (JP 11-069707 A).

See the description of Sohn et al. (EP 0836185 A2), *supra*.

As per claim 17, further comprising a fluid (372) disposed in the cavity (350) along with the spherical shaped rigid bodies.

As per claim 16, Sohn et al. (EP 0836185 A2) discloses all the features set forth with respect to the rejection, *supra*, but does not expressly disclose wherein the plurality of spherical

shaped rigid bodies (372) disposed in the cavity (350) are free to move within the cavity including movement across a center of rotation of the main body (310).

Omori et al. (JP 11-069707 A), however, teaches providing a self-compensating-dynamic-balancer integrated clamper (see abstract) with a plurality of spherical shaped rigid bodies (20) disposed in a cavity (see embodiments of FIGS 8 and/or 9) which are free to move within the cavity including movement across a center of rotation of the main body.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Omori et al. (JP 11-069707 A) as applied to Sohn et al. (EP 0836185 A2), including a free range of movement across the rotation center of the main body.

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the teachings of Omori et al. (JP 11-069707 A) as applied to Sohn et al. (EP 0836185 A2), including a free range of movement across the rotation center of the main body in order to allow the spherical balancing members to reposition themselves anywhere within the cavity body to overcome imbalance., allowing the "function of automatic center adjusting" as set forth in the abstract of Omori et al. (JP 11-069707 A).

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sohn et al. (EP 0836185 A2) in view of Takeuchi et al. (US 6,295,269 B1).

See the description of Sohn et al. (EP 0836185 A2), *supra*.

As per claim 17, further comprising a fluid (372) disposed in the cavity (350) along with the spherical shaped rigid bodies.

As per claim 16, Sohn et al. (EP 0836185 A2) discloses all the features set forth with respect to the rejection, *supra*, but does not expressly disclose wherein the plurality of spherical shaped rigid bodies (372) disposed in the cavity (350) are free to move within the cavity including movement across a center of rotation of the main body (310).

Takeuchi et al. (US 6,295,269 B1), however, teaches providing a self-compensating-dynamic-balancer integrated clamper (e.g., FIGS. 4 and 5) with a plurality of spherical shaped rigid bodies (29, 30) disposed in a cavity (21) which are free to move within the cavity including movement across a center of rotation of the main body (25) (i.e. within segments AR1 and AR2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Takeuchi et al. (US 6,295,269 B1) as applied to Sohn et al. (EP 0836185 A2), including a free range of movement across the rotation center of the main body.

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the teachings of Takeuchi et al. (US 6,295,269 B1) as applied to Sohn et al. (EP 0836185 A2), including a free range of movement across the rotation center of the main body in order to effectively cancel the unbalance due to center of gravity offset from the rotating axis, such that the rotor is free from vibrations due to angular velocity - see abstract of Takeuchi et al. (US 6,295,269 B1).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (571) 272-7577. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

William J. Klimowicz
Primary Examiner
Art Unit 2652

WJK